

RECEIVED

MAR 04 2005

DOE/NE-ID-11182
February 2005
Revision 1

D.O.E. STATE WASTE
MANAGEMENT & REMEDIATION DIVISION



U.S. Department of Energy
Idaho Operations Office

HWMA/RCRA Closure Plan for the CPP-648 Radioactive Solid and Liquid Waste Storage Tank System (VES-SFE-106)



Idaho National Engineering and Environmental Laboratory

DOE/NE-ID-11182
Project No. 24573
Revision 1

**HWMA/RCRA Closure Plan for the CPP-648
Radioactive Solid and Liquid Waste Storage Tank
System (VES-SFE-106)**

February 2005

Prepared for the
U.S. Department of Energy
Idaho Operations Office

ABSTRACT

This Hazardous Waste Management Act/Resource Conservation and Recovery Act closure plan for the Radioactive Solid and Liquid Waste Storage Tank System located in and adjacent to the Sludge Tank Control House (CPP-648), Idaho Nuclear Technology and Engineering Center, Idaho National Laboratory, was developed to meet the interim status closure requirements for a tank system. The system to be closed includes a tank and associated ancillary equipment that were determined to have managed hazardous waste. The CPP-648 Radioactive Solid and Liquid Waste Storage Tank System will be "clean closed" in accordance with the requirements of the Hazardous Waste Management Act/Resource Conservation and Recovery Act as implemented by the Idaho Administrative Procedures Act 58.01.05.009 and 40 Code of Federal Regulations 265. This closure plan presents the closure performance standards and methods of achieving those standards for the CPP-648 Radioactive Solid and Liquid Waste Storage Tank System.

ABSTRACT

The Highways Vehicle Pollution and Economics of Clean Air Policy
Research Project, funded by the California Energy Commission and the State of California
Transportation Agency, is part of the State's Long Range Transportation
(CART) Update. Major findings include the following: Current highway vehicle
emissions, even though down significantly from 1970 levels, still contribute to a
large share of total mobile emissions; fuel economy standards, if adopted, will
reduce fuel consumption by 1990 by 10.8% and reduce vehicle emissions by 10.8%;
and the state's proposed highway vehicle emissions reduction program
will result in significant economic benefits.

CONTENTS

ABSTRACT	iii
ACRONYMS	vii
1. INTRODUCTION	1-1
2. FACILITY DESCRIPTION	2-1
2.1 Site Description	2-1
2.2 Tank Description and Operational History	2-2
2.3 Associated Piping and Ancillary Equipment	2-5
2.4 System Boundaries	2-5
3. CURRENT AND MAXIMUM WASTE INVENTORIES AND CHARACTERISTICS	3-1
4. CLOSURE PERFORMANCE STANDARDS	4-1
4.1 Regulatory Closure Performance Standards	4-1
4.2 Required Activities for Achieving Closure Performance Standards	4-1
4.2.1 Standard 1	4-1
4.2.2 Standard 2	4-1
4.2.3 Standard 3	4-2
5. CLOSURE ACTIVITIES	5-5
5.1 Removal of Hazardous Waste Inventory	5-6
5.2 Removal of Tank and CPP-648	5-6
5.3 Closure of Ancillary Piping and Equipment	5-6
5.3.1 CPP-648 and CPP-603	5-6
5.3.2 Buried Lines	5-9
5.4 Soils	5-10
5.5 Waste Management	5-10
5.6 Closure Documentation	5-13
6. CLOSURE SCHEDULE	6-1
7. CLOSURE PLAN AMENDMENTS	7-1

8.	CERTIFICATION OF CLOSURE.....	8-1
9.	COST AND LIABILITY REQUIREMENTS.....	9-1
10.	REFERENCES	10-1
11.	DRAWINGS.....	11-1

FIGURES

2-1.	Map of the INL site	2-1
2-2.	Location of the VES-SFE-106 tank system and associated CPP-603 systems.....	2-3
2-3.	Elevated view of Tank VES-SFE-106.....	2-4
2-4.	Schematic P-CLOS-VES-SFE-106. Units and components to be HWMA/RCRA closed.....	2-7

TABLES

2-1.	Nonhazardous piping and ancillary equipment	2-5
3-1.	VES-SFE-106 tanks system current and maximum waste inventory	3-1
5-1.	Contaminant of concern and corresponding site-specific action levels.....	5-5
5-2.	CPP-648 HWMA/RCRA components to be removed.....	5-7
5-3.	CPP-603 HWMA/RCRA components to be removed.....	5-8
5-4.	Buried lines to be decontaminated.....	5-10
5-5.	Anticipated waste streams and disposal pathways	5-11
6-1.	Tank system closure schedule	6-2

ACRONYMS

BWTS	Basin Water Treatment System
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	contaminant of concern
DEQ	State of Idaho Department of Environmental Quality
FFA/CO	Federal Facility Agreement and Consent Order
HWD	hazardous waste determination
HWMA	Hazardous Waste Management Act
ICP	Idaho Completion Project
IDAPA	Idaho Administrative Procedures Act
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
LDR	land disposal restriction
PE	professional engineer
PEWE	process equipment waste evaporator
RCRA	Resource Conservation and Recovery Act
RWMC	Radioactive Waste Management Complex
TCLP	toxicity characteristic leaching procedure
TSDF	treatment, storage, and disposal facility
USC	United States Code
VCO	Voluntary Consent Order
WAG	Waste Area Group

ACRONYMS

AMZ	Amazon Web Services
CBRCY	Congregational Buddhist Church Corporation, New Zealand Ltd
CGS	Confederation of Religious Societies
GOC	Government of Ontario
GOJ	State of India Department of Environment & Climate
HAWCO	Hawke's Bay Association and County Council
HWD	Hawke's Bay District Council
HWWA	Hawke's Bay Wharf Management Authority
ICh	Japan Chikara no Hikitei
IDATA	Japan International Finance Corp.
IME	Japan Maritime Transport Corporation
INTEC	Japan Higher Technology and Innovation Council
FJR	Joint Japan Research
IPB	International Peace Bureau
PEN	Peace Education Network
RORI	Reserve Commission and Recovery Act
RUNIC	Reactive Web Information Council
TCT	Technical Committee regarding Isogonic
TSDR	Transnational Society and Global Policy
FSC	Forest Stewardship Council
AOC	Openly Catholic Council
WAG	World Agro Group